

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A fuel cartridge comprising:

a housing, defining an interior space, with the interior space confining a liquid, oxidizable fuel;

a fuel egress port supported by the housing, the fuel egress port providing egress of fuel from the interior space of the housing as a vapor, with the vapor exiting the housing through the fuel egress port; and

a resistive heating element disposed in the housing and in proximity to the fuel egress port configured to produce heat, the heat providing and provide a concomitant increase in a vaporization rate of the fuel as the vapor from the housing, with the cartridge having the fuel egress port configured to attach to a fuel cell to deliver an oxidizable vapor to the fuel cell.

2. (Withdrawn) The fuel cartridge of claim 1 further comprising:

a surface area enhanced planar vaporization membrane at the heat producing element.

3. (Withdrawn) The fuel cartridge of claim 2 wherein the surface area enhanced planar vaporization membrane is disposed about a substantial portion of the heat producing element.

4. (Withdrawn) The fuel cartridge of claim 2 wherein the surface area enhanced planar vaporization membrane is a composite membrane comprised of multiple layers or folds of polymer membrane to increase vapor permeation surface area.

5. (Withdrawn) The fuel cartridge of claim 2 wherein the surface area enhanced planar vaporization membrane is a membrane arranged as a series of folds.

6. (Withdrawn) The fuel cartridge of claim 2 wherein the surface area enhanced planar vaporization membrane is a polymer membrane provided with macroscopically irregular and/or microscopically roughened membrane surfaces to increase the effective membrane surface area for pre-evaporation.

7. (Withdrawn) The fuel cartridge of claim 2 wherein the heating element is disposed within the housing adjacent the surface area enhanced planar vaporization membrane that spaces a liquid source of hydrogen containing compound or carbonaceous fuel from a vapor phase of the source of hydrogen containing compound or carbonaceous fuel.

8. (Currently Amended) The fuel cartridge of claim 1 wherein the fuel confined by the housing of the cartridge is supplied as the vapor to a direct methanol fuel cell and is a liquid source of hydrogen containing compound or carbonaceous fuel.

9. (Previously presented) The fuel cartridge of claim 1 wherein the resistive heating element is a wire disposed in thermal communication with the interior of the cartridge.

10. (Previously presented) The fuel cartridge of claim 1 wherein the resistive heating element is a wire.

11. (Previously presented) The fuel cartridge of claim 1 wherein the resistive heating element spaces a vapor portion of the cartridge from a liquid reservoir of the cartridge.

12. (Currently Amended) A fuel cartridge, configured to deliver an oxidizable vapor to a fuel cell, the cartridge comprising:

a housing;

a fuel egress port supported by the housing configured to pass fuel in vapor phase, from the housing;

a bladder for containing a source of fuel;

a resistive heating element disposed in the housing and in proximity to the fuel egress port to produce heat, the heat providing and provide a concomitant increase in a vaporization rate of the fuel that exists the housing as the vapor phase; and
a piston that is urged against the bladder.

Claim 13 is canceled.

14. (Previously presented) The fuel cartridge of claim 12 further comprising a spring mechanism disposed to urge the piston against the bladder.

15. (Previously presented) The fuel cartridge of claim 12 further comprising a battery cell disposed to supply power to the resistive heating element.

16. (Original) The fuel cartridge of claim 12 wherein fuel cartridge is a prismatic shaped cartridge.

17. (Original) The fuel cartridge of claim 12 wherein the source of fuel in the bladder is methanol.

18. (Withdrawn) A fuel cartridge, comprising:
a housing;
a fuel egress port supported by the housing; and
a piston that is urged against the vaporization membrane, with the vaporization membrane providing a chamber in the fuel cartridge in vapor communication with the fuel cell anode.

19. (Withdrawn) The fuel cartridge of claim 18 further comprising a spring mechanism disposed to urge the piston against the membrane.

20. (Withdrawn) A fuel cartridge, comprising:

an inner housing having a opening to allow vapor to escape;
a vaporization membrane;
a piston that is urged against the vaporization membrane, with the vaporization membrane providing a chamber in the inner housing in vapor communication with the opening; and
an outer housing disposed around at least a portion of the inner housing, forming an outer chamber about the inner housing, with the outer chamber being in vapor communication with the chamber in the inner housing.

21. (Withdrawn) The fuel cartridge of claim 20 further comprising a vapor impermeable member disposed to terminate the outer chamber.

22. (Withdrawn) The fuel cartridge of claim 18 further comprising a spring mechanism disposed to urge the vapor impermeable member against a liquid fuel in the inner housing.